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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,775

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Akihiro Shimase

KAS-189

6851

7590

10/04/2004

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,775

Applicant(s)

SHIMASE ET AL.

Examiner

Michael P Nghiem

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 3 is/are allowed.
- 6) ☒ Claim(s) 1,4-8,11,12 and 15 is/are rejected.
- 7) ☒ Claim(s) 9,10,13 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-6-2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claims 4, 5, 7, and 15 are objected to because of the following informalities:

- claims 4, 5, 7, are the discriminating means (claim 4), dispensing-function abnormality determining means (claim 5), recording means (claim 7), and means for discriminating the extent of deterioration (claim 7) the same as the determination means of claim 1?
- claim 15, "said step" (line 10) lacks antecedent recording

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-8, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuda (JP 11-083868).

Regarding claims 1, 7, and 15, Tsuda discloses a sample dispensing apparatus and method (Fig. 3) comprising:

- a probe (1) for sucking and ejecting a sample (sample in 3), a dispensing syringe (8) for generating a pressure in said probe to suck and eject the sample (Fig. 3), a dispensing flow passage (7) connecting said probe and said dispensing syringe (Fig. 3), and a control unit (2) for controlling sucking and ejection operations of the sample (Fig. 3), said apparatus further comprising: at least one pressure sensor (15) for detecting a pressure in said dispensing flow passage (Fig. 3);

- pressure value storing means (19) for time-serially storing output values of said pressure sensor during an operation of dispensing the sample (translation, paragraph 0025, lines 5-6);

- storage means (translation, paragraph 0025, lines 4-5) for storing a reference database (predetermined negative pressure value) consisted of time-serial output values of said pressure sensor (translation, paragraph 0025, lines 4-5), which are obtained when the sample is normally sucked or ejected by said probe (Fig. 3);

- determining means (17) for carrying out multi-variable analysis of both said reference database and comparison data created based on the output values of said pressure sensor time-serially stored in said pressure value storing means, and for determining the presence or absence of an abnormality in the dispensing operation of the sample based on an analysis result (Solution, lines 4-9).

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Regarding claims 4, 5, and 7, Tsuda further discloses discriminating means (comprises 20 of 17) for, when the abnormality of sample dispensing is detected, comparing a pressure value immediately before the end of the sample sucking operation with a preset threshold, and for discriminating a cause of the dispensing abnormality (Solution, lines 4-9).

Regarding claim 6, Tsuda discloses that said sample dispensing apparatus has a function of determining the abnormality of dispensing each time said sample dispensing apparatus is started up (Solution, lines 1-4), and determining the presence or absence of the abnormality in the dispensing function of said sample dispensing apparatus (Solution, lines 4-9).

Regarding claim 8, Tsuda discloses cleaning means (comprises 13) for washing the interior of said dispensing flow passage including said sample probe; and wherein said sample dispensing apparatus has a function of, when the abnormality of sample dispensing is detected, washing the interior of said dispensing flow passage including said sample probe (translation, paragraph 0023, 0024), then dispensing a fluid having a known physical property, such as viscosity and density, and determining the dispensing abnormality in the fluid dispensing, thereby determining whether the dispensing function of said sample dispensing apparatus is restored (translation, paragraph 0025-0029).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuda in view of Shibuya et al. (US 2004/0057872).

Regarding claim 12, Tsuda further discloses an automatic analyzer (Problem To Be Solved, lines 3-4) has a function of performing a counteraction corresponding to the cause (perform washing process).

However, Tsuda does not disclose, regarding claim 11, that said automatic analyzer has a function of, when an abnormality of sample dispensing is detected, finding out a cause of the dispensing abnormality from among a plurality of classified causes and displaying the found-out cause.

However, Shibuya et al. discloses an automatic analyzer (Fig. 1) has a function of displaying analysis information (paragraph 0046).

It is noted that any information pertaining to the abnormality of sample dispensing can be grouped under the analysis information disclosed by Shibuya et al..

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to display information pertaining to when an abnormality of sample dispensing is detected, finding out a cause of the dispensing abnormality from among a plurality of classified causes for the purpose of displaying analysis related information.

Allowable Subject Matter

5. Claims 9, 10, 13, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 2 and 3 are allowed.

Reasons For Allowance

7. The combination as claimed wherein determining means for determining an abnormality of sample dispensing by comparing the Mahalanobis distance calculated

from both comparison data prepared based on the output values of said pressure sensor time-serially stored in said pressure value storing means and said reference database, with a preset threshold (claim 2) or the dispensing function of said sample dispensing apparatus is not restored even after repeating the washing a predetermined number of times (claim 9) or when an abnormality of dispensing is detected during suction of a sample, discarding the sample into said cleaning bath without ejecting the sample into said reaction vessel (claims 10) or when an abnormality of sample dispensing is detected, repeatedly dispensing the relevant sample within a predetermined number of times (claims 13, 14) is not disclosed, suggested, or made obvious by the prior art of record.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (571) 272-2269. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'Michael Nghiem', with a stylized flourish at the end.

**MICHAEL NGHIEM
PRIMARY EXAMINER**

Michael Nghiem

September 30, 2004